

Status of the Giant Magellan Telescope Project

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An international consortium of universities and research centers, including the University of Chicago, are developing an extremely large telescope to address forefront questions in astronomy and astrophysics. The Giant Magellan Telescope is a 25m-class instrument that will use adaptive optics technology and seeing-limited instruments to operate from the visible through mid-infrared regions of the spectrum. I will describe the organization of the project, our scientific objectives and technical status. The telescope will be located at the Las Campanas Observatory in Chile, one of the world's premier astronomical sites. Seven primary mirror segments, each 8.4m in diameter, will form an $f/0.7$ primary that, coupled with segmented secondary mirror, will feed a final $f/8$ focal plane using an aplanatic Gregorian optical prescription. The corrected field of view is 20 arcminutes in diameter with a plate scale of 1 arcsecond per mm. In the diffraction-limited mode the telescope will produce 10mas images at a wavelength of 1 micron. Several instrument concepts are under development, a selection of the first generation of instruments is planned for last 2011. The current schedule calls for the start of construction in 2012 and commissioning in 2019.